ABSTRACT

Noise and vibration of a helically-toothed-belt transmission device driven under heavy load or at a high-speed rotation, are reduced. A backlash "D" is selectively enlarged in a helically-toothed-belt transmission device that transmits drive force by meshing between a helically toothed belt and a helically toothed pulley. That is, a tooth helix angle "θ" is set in a range of $-0.2 \leq 1 - W \cdot \tan\theta / Pt \leq 0.75$, with "Pt" being a tooth pitch, "θ" a tooth helix angle, and W the width of the belt. The backlash "D" between the helically toothed belt and the helically toothed pulley is set to be 1.6%-3% of the tooth pitch "Pt".